1.0 PURPOSE AND SCOPE

(5.1.1, 5.1.2, 5.1.3, 5.1.4.a, 5.1.4.b, 5.1.4.c,.d, 5.1.5.a, 5.1.5.b, 5.1.5.c, 5.1.5.d, 5.1.5.e, 5.1.5.f, 5.1.5.g, 5.1.5.h)

This standard establishes the minimum requirements for the use and maintenance of hand tools and portable power operated tools, including those activated by an explosive powder charge, in compliance with 29 CFR 1910.169, Subpart P, and 29 CFR 1926, Subpart I.

This standard applies to all Washington River Protection Solutions, LLC (WRPS) employees and its subcontractors. Additional requirements for the maintenance, use, issue, storage, and control of tools and equipment are provided in TFC-OPS-MAINT-C-03.

2.0 IMPLEMENTATION

This standard is effective on the date shown in the header.

3.0 STANDARD

(5.1.1, 5.1.2, 5.1.4.a, 5.1.4.b, 5.1.4.c, 5.1.5.a, 5.1.5.b, 5.1.5.c, 5.1.5.d, 5.1.5.e, 5.1.5.f, 5.1.5.g, 5.1.5.h)

All tools covered by this standard shall be:

- Used in accordance with the manufacturer's recommendations and the applicable sections of 29 CFR 1910.169 and Subpart P, and 29 CFR 1926, Subpart I
- Maintained in a safe and functional condition
- Inspected before each use
- Removed from service when found to be damaged or defective
- Equipped with all required guards when in use
- Not hoisted or carried by attached hoses or electrical cords
- In conformance with manufacturer's attachment and energy level specifications
- Disconnected from their energy source when repairs, maintenance, or attachment changes are being performed
- Used with all eye, face, hand, foot, hearing, and respiratory protection required by the nature of the work that is being performed.

3.1 Electrically-Powered Tools

All portable electrical tools shall be:

- NRTL listed AC or AC/DC and marked accordingly by the manufacturer or approved by the Authority Having Jurisdiction (AHJ) for electrical matters.
- Grounded or double insulated in accordance with applicable standards
- Equipped with a constant pressure switch that will shut off power when the operator releases pressure.

3.2 Pneumatically-Powered Tools

All portable pneumatic tools shall be equipped with:

- A tool retainer to prevent the tool from being ejected
- Nailers or staplers, which operate at more than 100 psi, shall have an automatic fastener feed with a safety device on the muzzle to prevent unexpected ejection of the fasteners.
- Pressure reduction devices to prevent any hose with an inside diameter of 2 inch or greater from whipping in the event of hose failure
- "Dead man" switches
- A positive means to secure the tool to the hose or whip to prevent the tool from becoming accidentally expelled.

3.3 Powder-Actuated Tools

Powder-actuated tools shall be used in accordance with the following standards:

1. Operators of powder-actuated tools have received the required training and have a current permit certified by an authorized instructor
2. Powder-actuated tools and loads are locked in a container, stored in a safe place when not in use, and are accessible only to authorized personnel
3. The names of certified employees and their managers are posted at tool storage locations
4. Tools are operated in strict accordance with the manufacturer's instructions; only those type of fasteners and powder loads recommended by the tool manufacturer are used
5. Before use, the operator inspects the tool to determine if it is in proper working condition in accordance with the testing methods recommended by the manufacturer
6. Before driving a fastener, the operator checks the line-of-fire to ensure safety if the fastener penetrates completely through the work surface

7. Fasteners are not to be driven into very hard or brittle materials including cast iron, glazed tile, hardened steel, glass block, natural rock, hollow tile, or most brick

8. Fasteners are not to be driven into easily penetrated materials or materials of questionable resistance unless backed by a material that will prevent the fastener from passing completely through the other side

9. Tools are not loaded until just before the intended firing time

10. Neither loaded nor empty tools are to be pointed at any person and hands are to be kept clear of the open barrel end

11. The tools are always held perpendicular to the work surface when fastening into any material, except for specific applications recommended by the tool manufacturer

12. If a misfire occurs, the operator holds the tool firmly against the work surface for a period of thirty seconds and then follows the instructions set forth by the tool manufacturer

13. A sign at least 8 x 10 inches, with letters in boldface type and at least one inch in height, is to be posted in plain sight on all construction projects where tools are used;

    The sign says “POWDER-ACTUATED TOOL IN USE,” or something similar.

14. The tool is not used in an explosive or flammable atmosphere

15. Potential exposure to lead is assessed in accordance with TFC-ESHQ-IH-STD-08.

3.4 Abrasive Wheel and Grinding Machinery Requirements

Employees using abrasive wheel and grinding machinery shall ensure that:

1. Employees working with grinding machines, cut-off machines, or other applications for abrasive wheels, are trained in their safe operation and maintenance

2. Abrasive wheels are handled and stored in a manner that prevents damage to the wheels

3. Abrasive wheels should not be placed in a manner that could collect foreign materials such as dirt.

4. Abrasive wheels and/or the mounting hardware/components of machines on which they are mounted are not to be modified

5. Abrasive wheels are the correct size, rpm rating, and type for the machine on which they are to be mounted and for the work to be performed

6. Abrasive wheels are "ring tested" before mounting and visually inspected daily before use

7. Wheels are "tapped" about 45 degrees on each side of the vertical centerline and about 1 or 2 inches from the periphery. Then the wheels are rotated 45 degrees and the test is repeated. A sound and undamaged wheel will give a clear metallic tone. If cracked, there will be a dead sound and not a clear "ring."

8. After mounting, new wheels are run at least one minute at full speed before work is applied or personnel stand in front of, or in line with, the wheel.

3.5 Jacks (Lever and Ratchet, Screw, and Hydraulic)

Employees using jacks shall ensure that:

1. The manufacturer's rated capacity is legibly marked on all jacks and is not exceeded

2. All jacks are provided with a positive stop to prevent over-travel

3. Blocking and cribbing is at the base of the jack, when necessary, for a firm foundation

4. A wood block is placed between the metal cap of the jack and the load when there is a possibility of slipping

5. After a load has been raised, it is immediately cribbed, blocked, or otherwise secured

6. Jacks are properly lubricated at regular intervals in accordance with the manufacturer's instructions.

3.6 Compressed Air

(5.1.3)

1. Compressed air shall not be used for cleaning purposes except where reduced to less than 30 psi and then only with effective chip guarding and personal protective equipment.

2. Abrasive blast cleaning nozzles shall be equipped with an operating valve that must be held open manually. A support shall be provided on which the nozzle may be mounted when it is not in use.

3. Air receivers must have a drain pipe and valve installed at the lowest point for the removal of accumulated oil and water. Adequate automatic traps may be installed in addition to drain valves. The drain valve shall be opened at such intervals as to prevent the accumulation of excessive amounts of liquid in the receiver.

4. Every air receiver shall be equipped with a readily visible indicating pressure gauge and with one or more spring-loaded safety valves. The total relieving capacity of such safety valves shall prevent pressure in the receiver from exceeding the maximum allowable working pressure of the receiver by more than 10 percent.

5. Safety valves, indicating devices, and controlling devices shall not be readily rendered inoperative by any means, including the elements.

6. All safety valves shall be tested at least annually to determine whether they are in good operating condition.

4.0 DEFINITIONS

No terms or phrases unique to this standard are used.

5.0 SOURCES

5.1 Requirements

1. 10 CFR 851, "Worker Safety and Health Program."

2. DOE-0359, "Hanford Site Electrical Safety Program."

3. 29 CFR 1910.169, "Air receivers."

4. 29 CFR 1910, Subpart P, "Hand & Portable Powered Tools & Other Hand-Held Equipment."
   a. 1910.242, "Hand and portable powered tools and equipment, general."
   b. 1910.243, "Guarding of portable powered tools."
   c. 1910.244, "Other portable tools and equipment."

5. 29 CFR 1926, Subpart I, "Tools - Hand and Power."
   a. 1926.300, "General requirements."
   b. 1926.301, "Hand tools."
   c. 1926.302, "Power-operated hand tools."
   d. 1926.303, "Abrasive wheels and tools."
   e. 1926.304, "Woodworking tools."
   f. 1926.305, "Jacks - lever and ratchet, screw and hydraulic."
   g. 1926.306, "Air receivers."
   h. 1926.307, "Mechanical power-transmission apparatus."

5.2 References

1. TFC-ESHQ-IH-STD-08, "Lead Control Program."

2. TFC-OPS-MAINT-C-03, "Maintenance Tools and Equipment Control."